

US EPA ARCHIVE DOCUMENT



THE CATAWBA INDIAN NATION  
OFFICE OF TRIBAL GOVERNMENT

996 AVENUE OF THE NATIONS ROCK HILL, SOUTH CAROLINA 29730  
TELEPHONE (803) 366-4792 FACSIMILE (803) 366-0629

February 29, 2012

Ms. Gwendolyn Keyes Fleming  
Regional Administrator  
U.S. Environmental Protection Agency Region 4  
Atlanta Federal Center  
61 Forsyth Street, SW  
Atlanta, GA 30303-3104

RE: Designation Recommendation for the 2008 Ozone Standard for Catawba Indian Nation

Dear Regional Administrator Fleming:

Thank you for your December 8<sup>th</sup>, 2011 letter describing the 2008 ozone standard area boundary designation process and EPA's preliminary determination for the Charlotte, NC/Rock Hill, SC region. EPA has recommended that the urbanized portion of eastern York County (which includes Catawba Indian Reservation lands) be included as part of the Charlotte-Gastonia-Salisbury non-attainment area. We respectfully disagree with this determination and request that EPA utilize the new *EPA Policy and Guidance for Establishing Separate Air Quality (NAAQS) Designations for Indian Country* issued on December 20, 2011. It is the official position, and our formal recommendation to EPA, that the sovereign tribal government of the Catawba Indian Nation and our Reservation lands be excluded from the recommended non-attainment area and be separately designated as "Attainment/Unclassifiable."

Based on Section 107(d)(1)(A)(i) of the Clean Air Act, a non-attainment area is defined as an area that is "violating an ambient air standard" or is "contributing to a nearby area that is violating the standard." It is our opinion that the Catawba Indian Nation lands do not meet this definition and, therefore, a determination of "attainment/unclassifiable" is warranted. We have come to this conclusion based on the following data and information as outlined in EPA's multi-factor analysis.

Air Quality Data

Currently, there is no air quality data or a violating air quality monitor for areas within the geographic boundaries of the Catawba Indian Nation Reservation. Although we do not feel the York County monitor is properly placed to accurately measure air quality from within the urbanized eastern portion of York County or the Catawba Indian Nation<sup>(1)</sup>, the 2011 ozone design value of 0.064ppm for the York County monitor is well below the 2008 standard. Since there is no air quality data that accurately represents the conditions directly within the Catawba Indian Nation, the Tribe is pursuing development of an air quality monitoring site on the Reservation to improve the quality of information required for future public health, planning, and regulatory management decisions.

Emissions and Emissions-Related Data

There are no point sources of air quality emissions within or directly adjacent to the boundaries of the Catawba Indian Nation. Several permitted facilities with significant NO<sub>x</sub> (7,031 tons/year) and VOC (11,840 tons/year) emissions are located within York County<sup>(2,3)</sup>, however, these sources are at least two miles away and it is unclear whether or not they are impacting tribal lands or tribal member's health. It is clear that these facilities do contribute to local air pollution and the formation of ozone within non-attainment areas downwind.

EPA and South Carolina Department of Environmental Health and Control (DHEC) have determined that a significant portion of NO<sub>x</sub> and VOC emissions come from area and mobile sources in the Charlotte-Gastonia-Salisbury, NC-SC area. Areas of rapidly increasing urbanization and population density and associated increased motor vehicle emissions may contribute to ozone formation and ozone standard violations in nearby areas. US Census Bureau data shows that during the period of 2000-2010, the population of York County increased 36% from 165,705 to 226,073.<sup>(4)</sup>



Data provided by DHEC in the *March 12, 2009 South Carolina Ozone Nonattainment Boundary Recommendations* report states that the eastern Non-Attainment Area of York County contains approximate 90% of the county population and 94% of the vehicle miles traveled.<sup>(5)</sup> The DHEC report also mentions that 60% of workers who live in York County work within the county, however, neglects to mention that 36% of workers that live in York County travel north and work in North Carolina.<sup>(6)</sup> Although data suggests that eastern York County is experiencing rapid population growth and significantly contributes to mobile source emissions problems in the region, this information does not accurately reflect the conditions of the Catawba Indian Nation.

#### Catawba Indian Nation Demographics and Statistics

The Catawba Indian Nation along the far eastern border of York County, outside the urban cluster of Rock Hill, remains less densely populated and is considerably more rural in character. The Catawba Indian Nation consists of two tracts of land along the Catawba River<sup>(7,8)</sup> with a total land base of approximately 1,000 acres, which comprises only 0.002% of the land area of York County and 0.004% of the York Non-Attainment Area. The Catawba Indian Nation members living on the Reservation comprise only about 0.003% of the population of York County with close to zero population growth. The most recent and accurate demographic data for the Catawba Indian Nation indicates the population consists of 586 tribal members living in 312 homes on the Reservation, many of which (42%) are children and elderly who do not work or regularly commute off the reservation.<sup>(9, 10)</sup> There are 340 adult tribal members who are of working age living on the reservation, however, the reservation has a high unemployment rate and many adults do not have transportation.<sup>(11, 12)</sup> It is important to mention that in 2011 the Catawba Indian Nation initiated a public transit program to do their part in helping to reduce vehicle emissions in the area as well as provide assistance to many tribal members who have limited or no transportation.<sup>(12)</sup> This information further supports the conclusion that the Catawba Indian Nation does not significantly contribute to the high vehicle miles traveled (VMT) and mobile emissions source calculations that are more relevant along the I-77 commuter corridor within York County.<sup>(13)</sup> Furthermore, the Catawba Indian Nation lands are located at the end of the roadways serving them so there is no thru-traffic or additional mobile emissions from vehicles traveling or commuting through the Reservation to other areas.

#### Meteorology (Weather/Transport Patterns)

EPA's analysis of National Weather Service data indicates that during the ozone season, the predominant wind direction is from the south/southwest. Therefore, precursor emissions from NOx and VOC point sources and mobile vehicle sources that contribute to ozone formation will move primarily from south to north. For this reason, EPA has determined that the eastern urbanized area of York County does contribute to air quality problems and ozone standard violations in the Charlotte Non-Attainment area. Using this analysis and logical reasoning, the York County ozone monitor located in the far southwest rural area of the York Non-Attainment area more accurately represents upwind, background levels of ozone<sup>(1)</sup>. The Arrowood ozone monitor (design value 0.076ppm) located immediately adjacent and downwind from the Rock Hill urban area is likely to more accurately reflect ozone concentrations from the eastern York County non-attainment area, at least during times of prevailing southwesterly winds<sup>(14)</sup>.

#### Jurisdictional Boundaries

The "Indian Country" of the Catawba Indian Nation is located entirely within York County and the Rock Hill-Fort Mill Area Transportation Study (RFATS) Metropolitan Planning Organization (MPO) area.<sup>(7,8)</sup> The Tribe recognizes that the South Carolina Air Quality State Implementation Plan (SIP) and other regulatory policies and procedures do currently apply to the Catawba Indian Nation and Reservation lands. The proposed separate ozone designation of "attainment" for the Catawba Indian Nation is not expected to have any adverse effects on local air quality planning, permitting, or enforcement functions for the surrounding non-attainment areas. The Catawba Indian Nation will continue to serve as an active member of RFATS working on transportation conformity planning while also working toward increasing our participation and involvement in local and regional air quality monitoring, planning, and pollution control programs and strategies. We intend to fully protect and exercise the sovereign status and federal trust relationship we have with the United States Government and U. S. Environmental Protection Agency to insure that human health and the environment are adequately protected and the Clean Air Act is properly implemented on our tribal lands and in our region.




### Conclusion

In conclusion, based on EPA's new policy and guidance for establishing separate air quality designations for Indian Country, we feel the unique status and circumstances of the Catawba Indian Nation deserve special consideration in EPA's 2008 ozone standard boundary determinations. As we have discussed and described herein, much of the data and information EPA has used in their preliminary multi-factor analyses do not pertain and are not appropriate for the Catawba Indian Nation. There is no evidence to suggest that the tribal lands of the Catawba Indian Nation are "violating an ambient air standard" or "contributing to a nearby area that is violating the standard." The Catawba Indian Nation lands should be designated as Attainment/Unclassifiable for the 2008 ozone standard.

Thank you for the opportunity to provide comments and recommendations to EPA Region 4 as you make your final ozone standard determinations for South Carolina. We look forward to working with you and your staff further as the Catawba Indian Nation builds technical capacity and gets more involved in local and regional air quality monitoring, planning, and regulatory issues. If you have any questions regarding our issues and concerns or need additional information, please contact either Derrick Brasington or Darin Steen of my staff.

Sincerely,



William Harris, Chief  
Catawba Indian Nation

Cc: Beverly H. Banister, Director of Air, Pesticides, & Toxics Mgmt. Division – EPA Region 4  
Jane Spann, Ozone Coordinator, EPA Region 4

### Reference Information and Attachments

- (1) The South Carolina Department of Environmental Health and Control *2011 Annual Air Network Monitoring Plan* (p. 37-38) states that the York County ozone monitor site is located in a rural setting and represents background ozone levels upwind from Charlotte. Based on its location and monitoring objective, the York County monitor purposely reflects low, ambient ozone concentrations unaffected by air pollution which may not be an accurate representation of air quality conditions directly within the urbanized Rock Hill area and I-77 corridor.
- (2) Maps depicting locations of significant NOx and VOC emissions sources within York County
- (3) Table 3 showing 2008 NOx and VOC emissions for York County are some of the highest in the region
- (4) Table 4 showing the large population increase in York County from 2000-2010
- (5) Page 170-171 of DHEC's 2008 Ozone Boundary Recommendations Report (3/12/2009) lists several factors DHEC used in coming to their own conclusion is designating eastern York County as non-attainment. The York County Population Density map (p.182) and Average Daily Traffic Count map (p.186) illustrate these points very well.
- (6) Table D-1 (page 184-185) shows York County Work Commute Patterns and the large numbers of workers who travel to North Carolina (2000 census). The current numbers and percentages are likely much higher based on the 36+% population increase.
- (7) York County map showing approximate locations of Catawba Indian Reservation lands in relation to Rock Hill and the York County and Arrowood ozone monitors.
- (8) Maps and aerial photos of Catawba Indian Nation lands east of Rock Hill, SC (Google maps and York County GIS Parcel Maps)
- (9) Catawba Nation Demographics: 198 Children (0-18 years old); 340 Adults (19-64 years old); 48 Seniors (65+ years old)
- (10) Map of Rock Hill Area Schools Attended by Catawba Indian Nation Children (Tribal Information)
- (11) Catawba Unemployment Rate is ~ 22-30%, more than twice the state average (Tribal survey 2010-Community Planner)
- (12) Catawba Indian Nation Public Transit Program (Tribal Information – Community Planner, Transit Coordinator)
- (13) Average Daily Traffic count data for the Catawba Reservation indicates that ADTs are significantly lower (<1,000) than in most other areas of eastern York County (5,000-120,000+)
- (14) Ozone Design Values for the Metrolina Region and Wind Rose information for the Arrowood Ozone Monitor.

## (1) South Carolina Department of Environmental Health and Control 2011 Annual Air Network Monitoring Plan - York County Ozone Monitor Information (pages 37-38)

### York CMS

CSA/MSA: Charlotte-Gastonia-Salisbury CSA / Charlotte-Gastonia-Concord MSA

AQS Site ID: 45-091-0006

Location: 2316 Chester Highway (US 321)

County: York

Coordinates: +34.935817, -81.228409

Date Established: March 30, 1993

Site Evaluation: The most recent site evaluation was conducted on June 13, 2006 (QA Check: May 02, 2008).



The York CMS site is located in south-central York County. The site was established to represent background levels near the Charlotte urban area. This monitor is located in a rural setting to support Charlotte-Rock Hill reporting and forecasting. The sample inlets are 171.4 meters from the nearest road.

This site is important for forecasting ozone concentrations in the Charlotte Metropolitan area. Additionally, the long historical record and location of the site make the data useful to both North and South Carolina Air Programs. In addition to measuring ozone, the York site also measures wind speed and

wind direction.

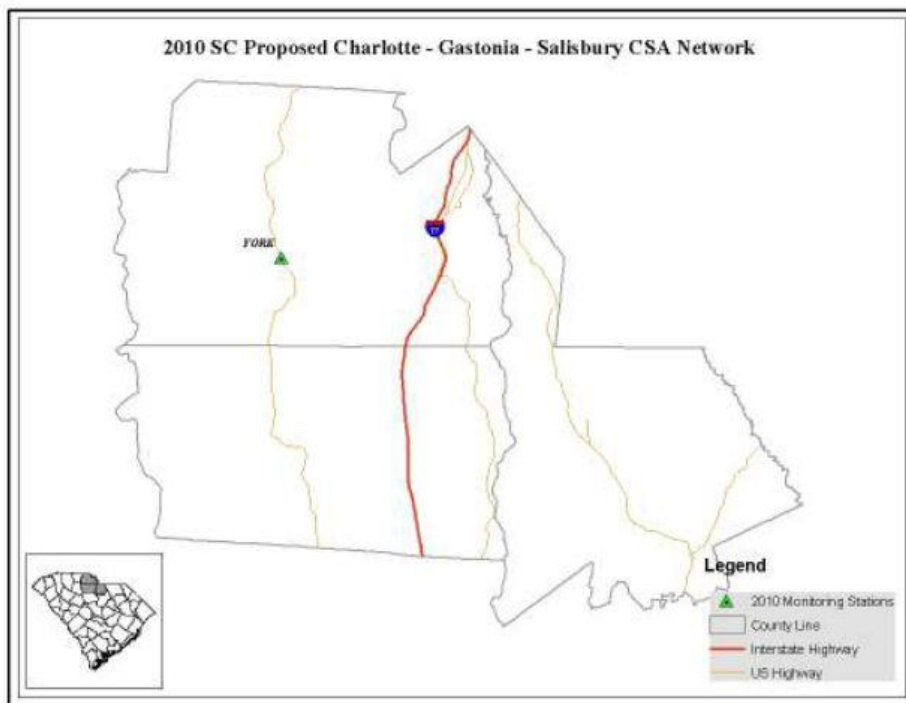
Changes for 2011:

No changes are planned for 2011.

Monitors:

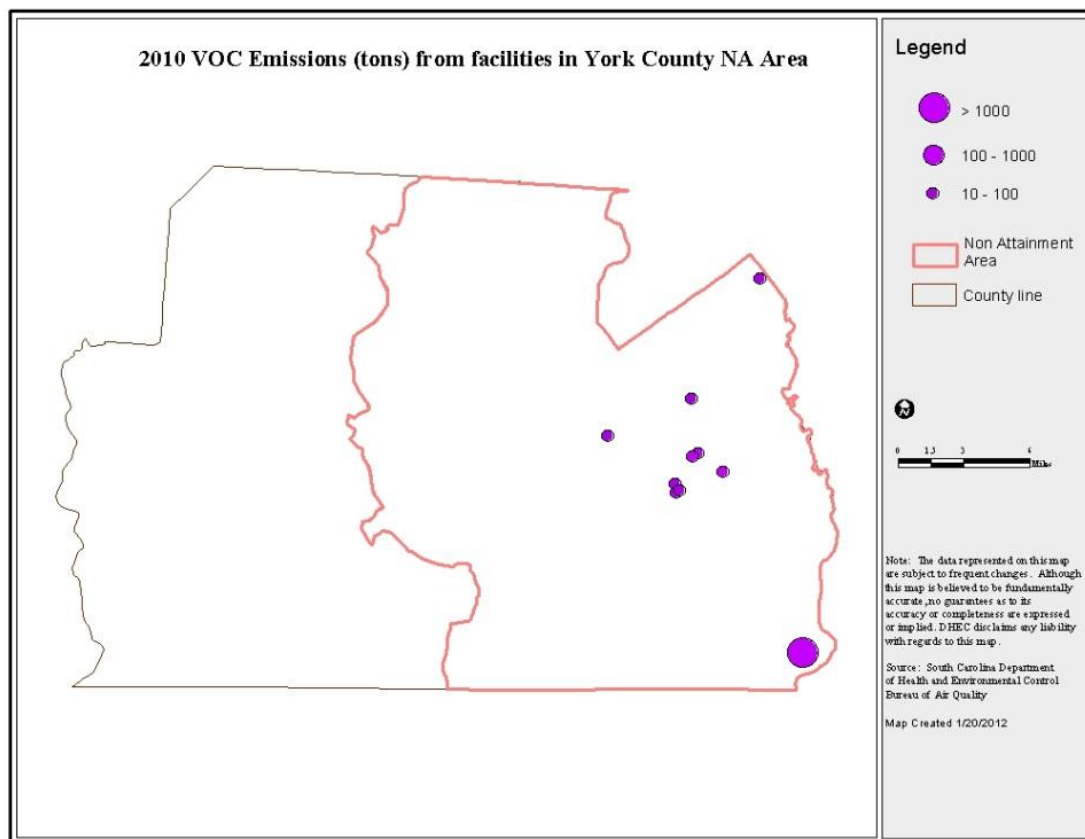
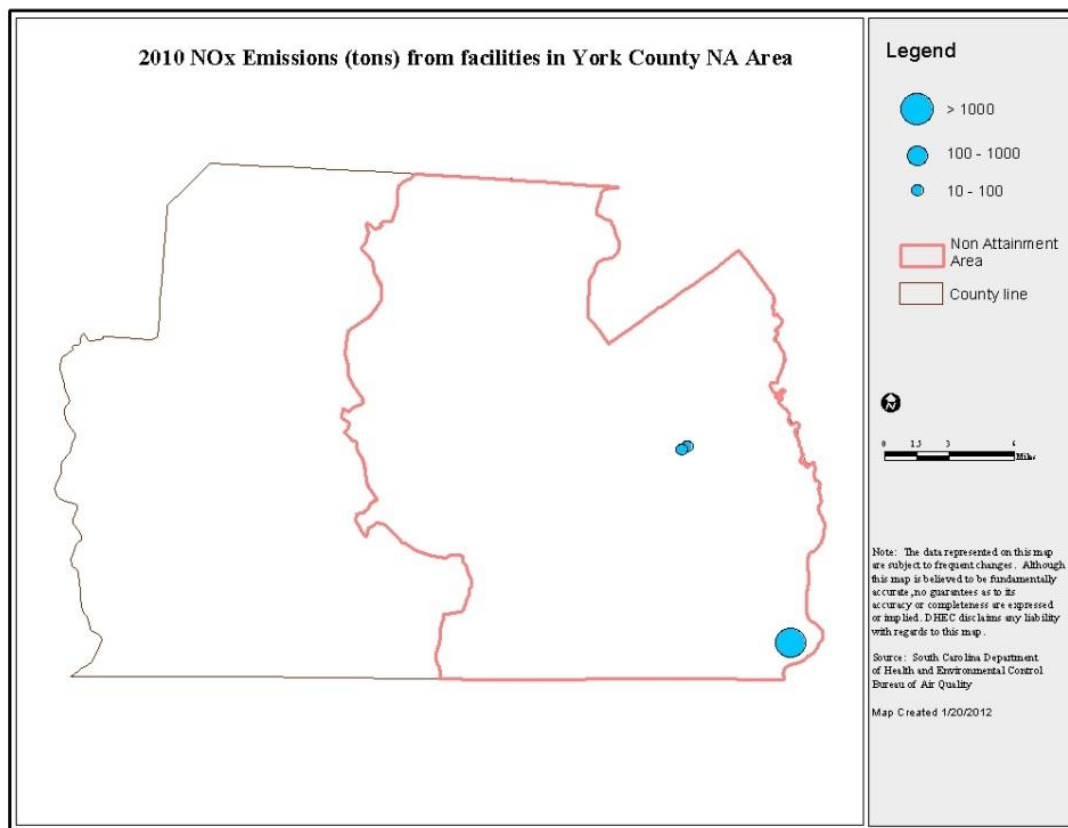
| Parameter              | Scale        | Objective         | Designation    | Probe Height (m) | Analysis Method                             | Sampling Frequency |
|------------------------|--------------|-------------------|----------------|------------------|---|--------------------|
| Ozone                  | Urban        | Upwind Background | SLAMS          | 3.3              | FEM Ultraviolet Photometry                  | Continuous         |
| Wind Speed / Direction | Neighborhood | Local Conditions  | non-regulatory | 10.0             | Instruments for wind speed, wind direction. | Continuous         |

### Charlotte-Gastonia-Salisbury CSA (part)





## (2) Maps depicting significant NOx and VOC emissions sources within York County



**(3) Table 3 showing 2008 NO<sub>x</sub> and VOC emissions for York County are some of the highest in the region**

(Source: Page 6 of EPA's Factor Assessment of South Carolina Area Designations for the 2008 Ozone NAAQS)

Table 3. Total 2008 NO<sub>x</sub> and VOC Emissions.

| County          | State Recommended Nonattainment? | NO <sub>x</sub> (tpy) | VOC (tpy) |
|-----------------|----------------------------------|-----------------------|-----------|
| Anson, NC       | No                               | 1,241                 | 1,123     |
| Cabarrus, NC    | Yes                              | 5,361                 | 9,074     |
| Chester, SC     | No                               | 2,652                 | 1,780     |
| Cleveland, NC   | No                               | 3,393                 | 4,799     |
| Gaston, NC      | Yes                              | 13,002                | 7,326     |
| Iredell, NC     | Yes (partial)                    | 10,261                | 10,815    |
| Lancaster, SC   | No                               | 1,626                 | 2,744     |
| Lincoln, NC     | Yes                              | 2,097                 | 3,320     |
| Mecklenburg, NC | Yes                              | 27,275                | 33,412    |
| Rowan, NC       | Yes                              | 7,117                 | 9,834     |
| Stanly, NC      | No                               | 1,935                 | 2,986     |
| Union, NC       | Yes                              | 5,190                 | 7,748     |
| York, SC        | No                               | 7,031                 | 11,840    |
| Areawide:       |                                  | 88,179                | 106,802   |

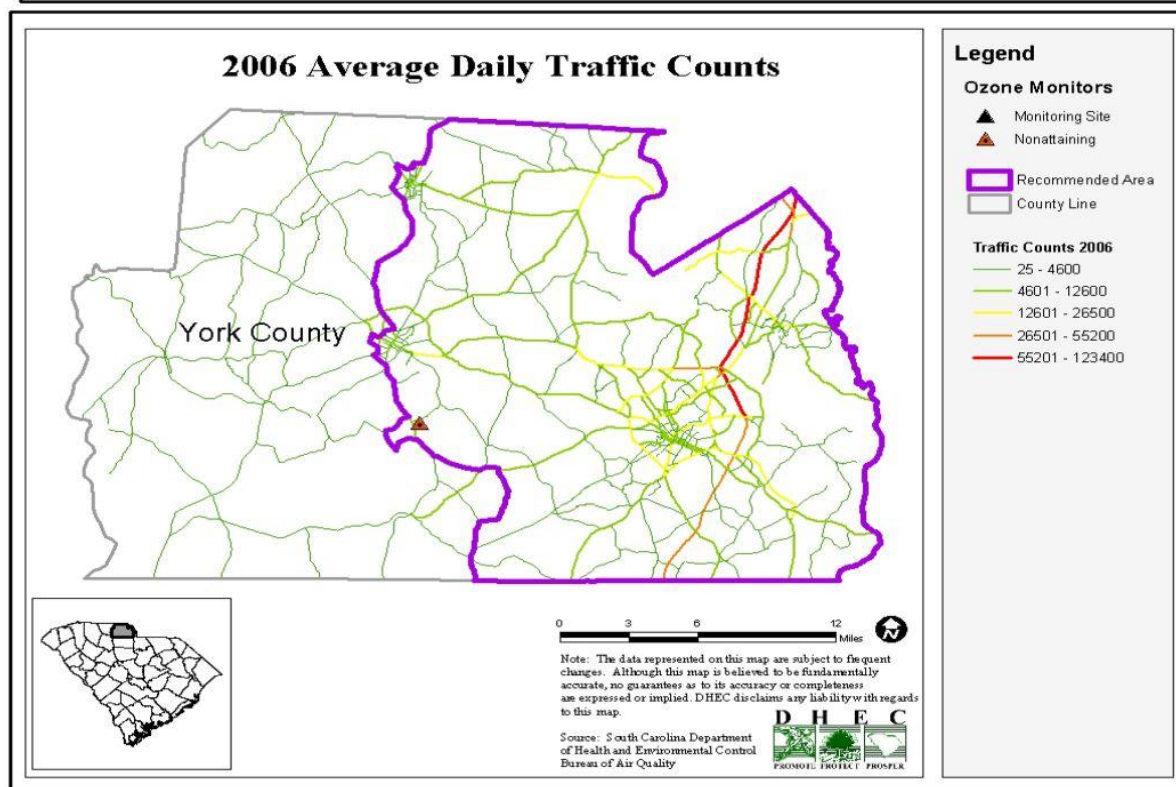
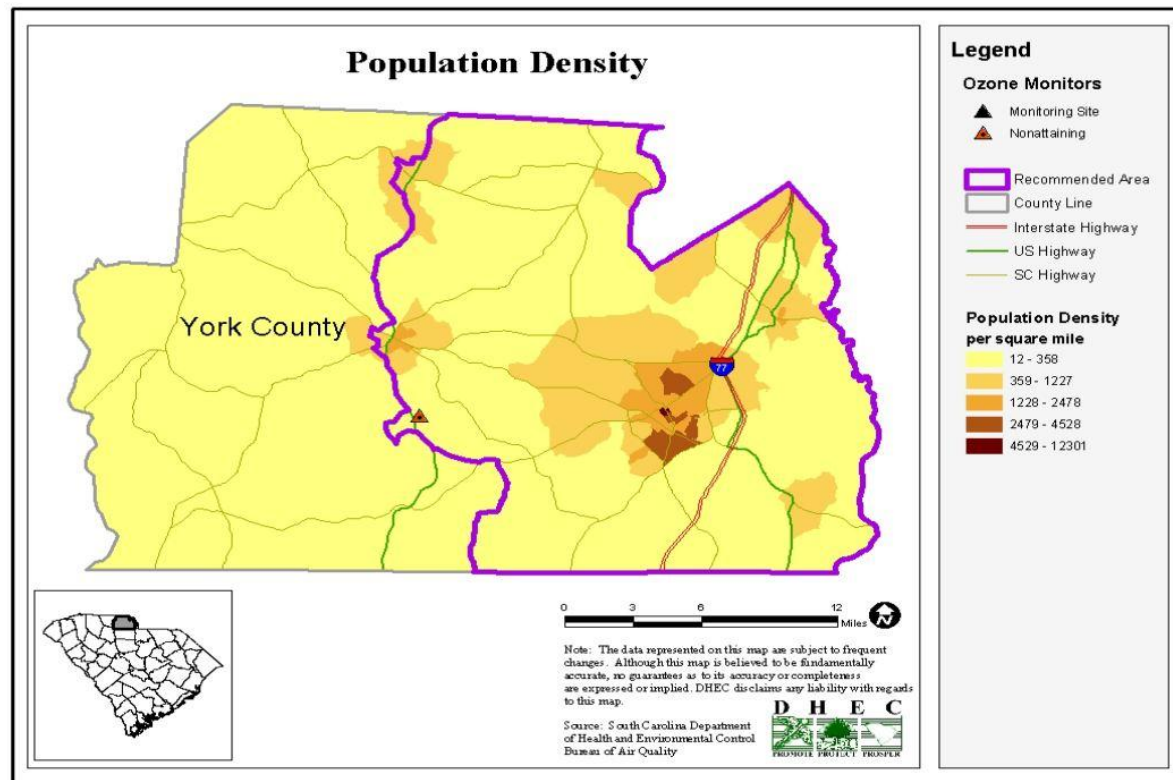
**(4) Table 4 showing the large population increase in York County from 2000-2010 census data**

(Source: Page 7 of EPA's Factor Assessment of South Carolina Area Designations for the 2008 Ozone NAAQS)

Table 4. Population and Growth.

| County          | State Recommended Nonattainment? | 2010 Population | 2010 Population Density (1000 pop/sq mi) | Absolute change in population (2000-2010) | Population % change (2000-2010) |
|-----------------|----------------------------------|-----------------|--|---|---------------------------------|
| Anson, NC       | No                               | 26,948          | 0.05                                     | 1,637                                     | +6%                             |
| Cabarrus, NC    | Yes                              | 178,011         | 0.49                                     | 45,793                                    | +35%                            |
| Chester, SC     | No                               | 33,140          | 0.06                                     | (968)                                     | -3%                             |
| Cleveland, NC   | No                               | 98,078          | 0.21                                     | 1,607                                     | +2%                             |
| Gaston, NC      | Yes                              | 206,086         | 0.57                                     | 15,310                                    | +8%                             |
| Iredell, NC     | Yes (partial)                    | 159,437         | 0.27                                     | 35,828                                    | +29%                            |
| Lancaster, SC   | No                               | 76,652          | 0.14                                     | 15,259                                    | +25%                            |
| Lincoln, NC     | Yes                              | 78,265          | 0.25                                     | 14,176                                    | +22%                            |
| Mecklenburg, NC | Yes                              | 919,628         | 1.67                                     | 218,914                                   | +31%                            |
| Rowan, NC       | Yes                              | 138,428         | 0.26                                     | 7,753                                     | +6%                             |
| Stanly, NC      | No                               | 60,585          | 0.15                                     | 2,339                                     | +4%                             |
| Union, NC       | Yes                              | 201,292         | 0.31                                     | 75,733                                    | +60%                            |
| York, SC        | No                               | 226,073         | 0.32                                     | 60,368                                    | +36%                            |
| Areawide:       |                                  | 2,402,623       | 0.36                                     | 493,749                                   | +26%                            |

(5) DHEC's 2008 Ozone Boundary Recommendations Report (3/12/2009) lists several factors and provides many good illustrations to justify designating eastern York County as a non-attainment area. (Page 182 and 186 )

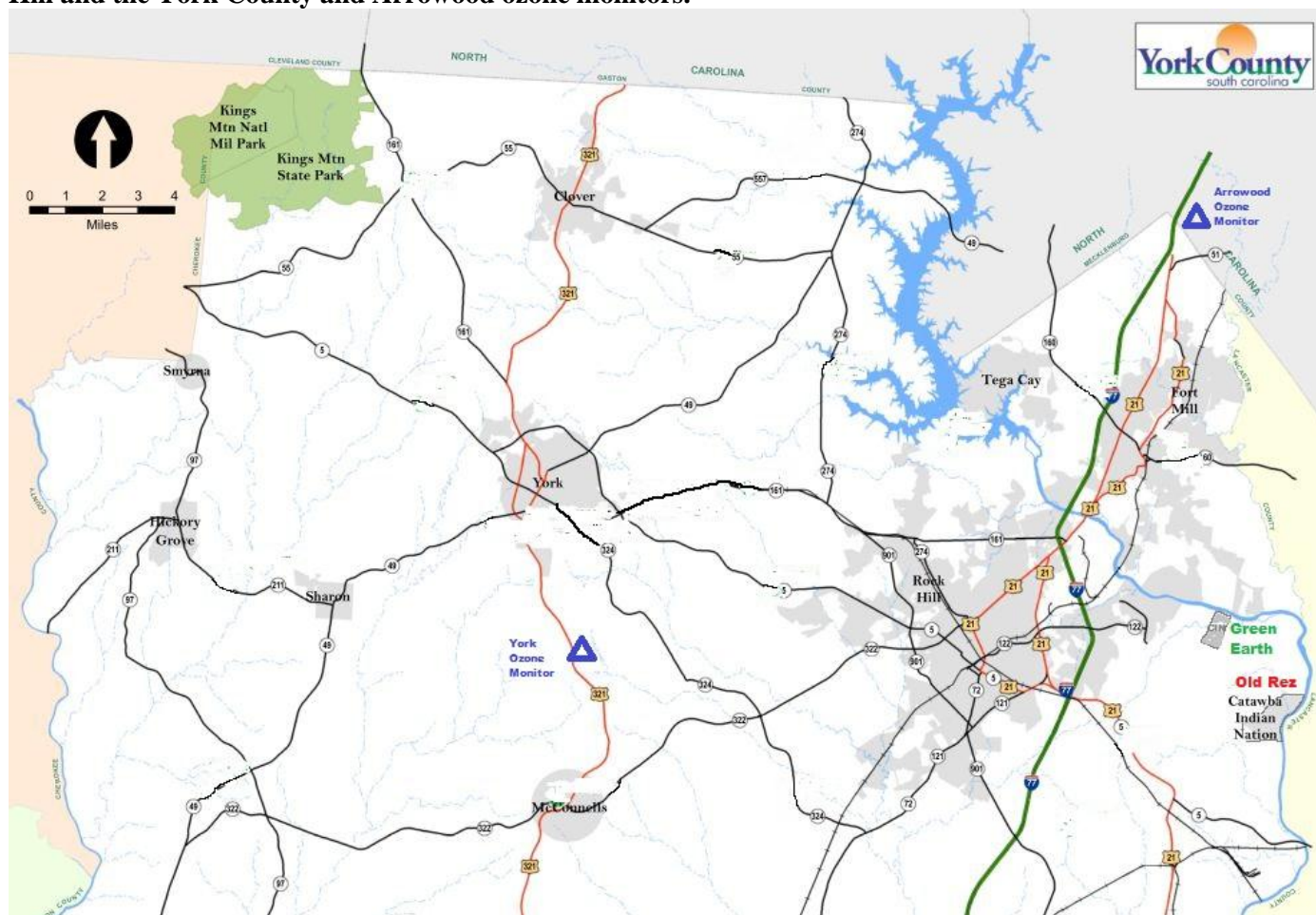




(6) DHEC's 2008 Ozone Boundary Recommendations Report (3/12/2009) Table D-1 (page 184-185) shows York County Work Commute Patterns and the large numbers of workers who travel to North Carolina (2000 census). The current numbers and percentages are likely much higher based on the 36+% population increase.

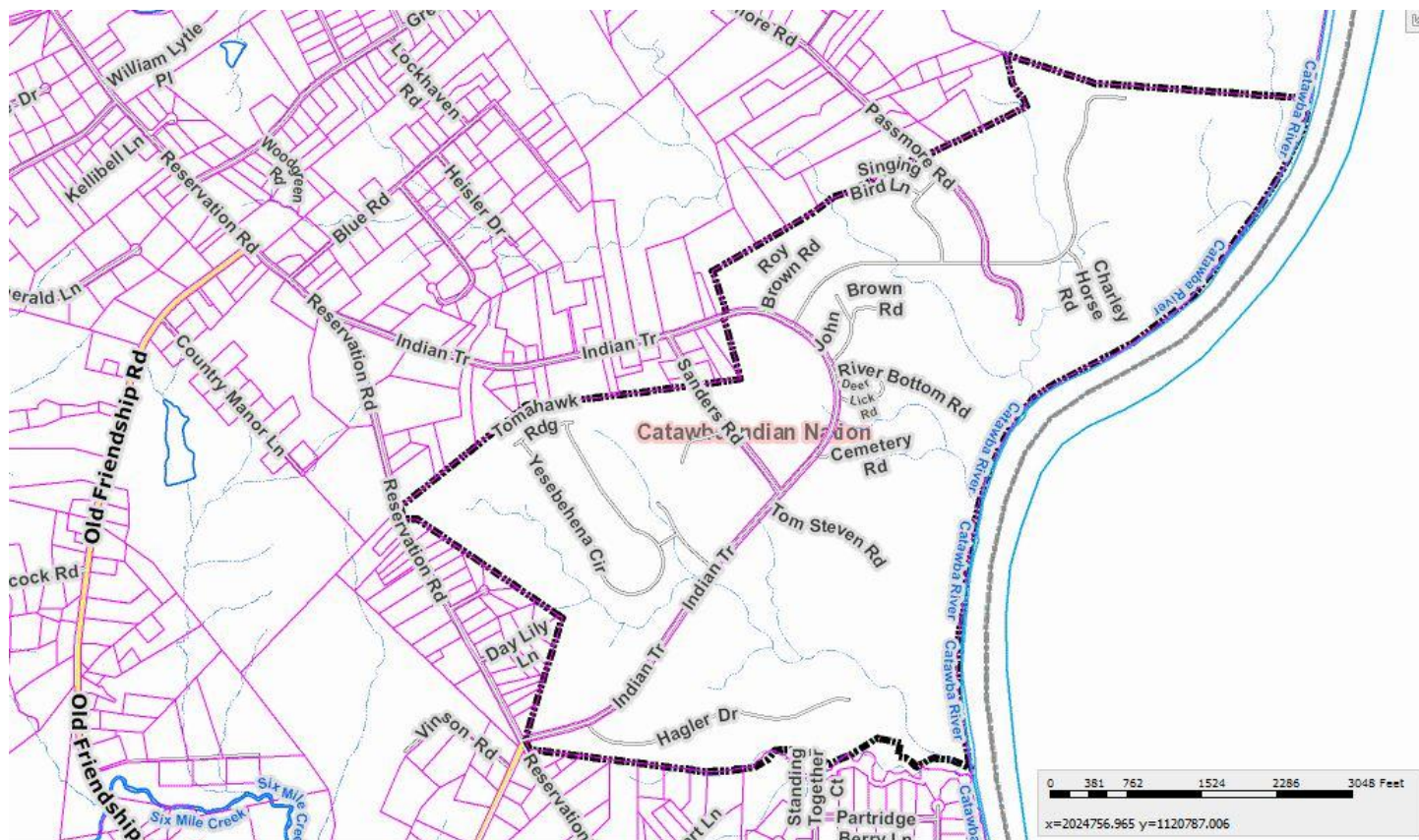
| County               | Workers Living in York County<br>by Work Location | Workers Employed in York County<br>by Residence Location |
|----------------------|---|--|
| Fairfield            | 46  | 158  |
| Florence             | 22  | 25   |
| Georgetown           | 19  | 0  |
| Greenville           | 85  | 73   |
| Hampton              | 9   | 0  |
| Greenwood            | 0   | 14   |
| Horry                | 25  | 20   |
| Kershaw              | 20  | 125  |
| Lancaster            | 963   | 2775   |
| Laurens              | 0   | 7  |
| Lee                  | 0   | 5  |
| Lexington            | 111   | 146  |
| Mecklenburg<br>Co NC | 23,907  | 4,217  |
| NC, other            | 4,496   | 3,697  |
| Newberry             | 34  | 25   |
| Oconee               | 9   | 9  |
| Orangeburg           | 0   | 37   |
| Other States         | 538   | 370  |
| Pickens              | 2   | 33   |
| Richland             | 188   | 119  |
| Saluda               | 7   | 6  |
| Spartanburg          | 120   | 130  |
| Sumter               | 7   | 0  |
| Union                | 74  | 54   |
| Williamsburg         | 0   | 10   |
| York                 | 47,898  | 47,898   |
| Grand Total          | 79,946  | 63,554   |

(7) York County map showing approximate locations of Catawba Indian Reservation lands in relation to Rock Hill and the York County and Arrowwood ozone monitors.





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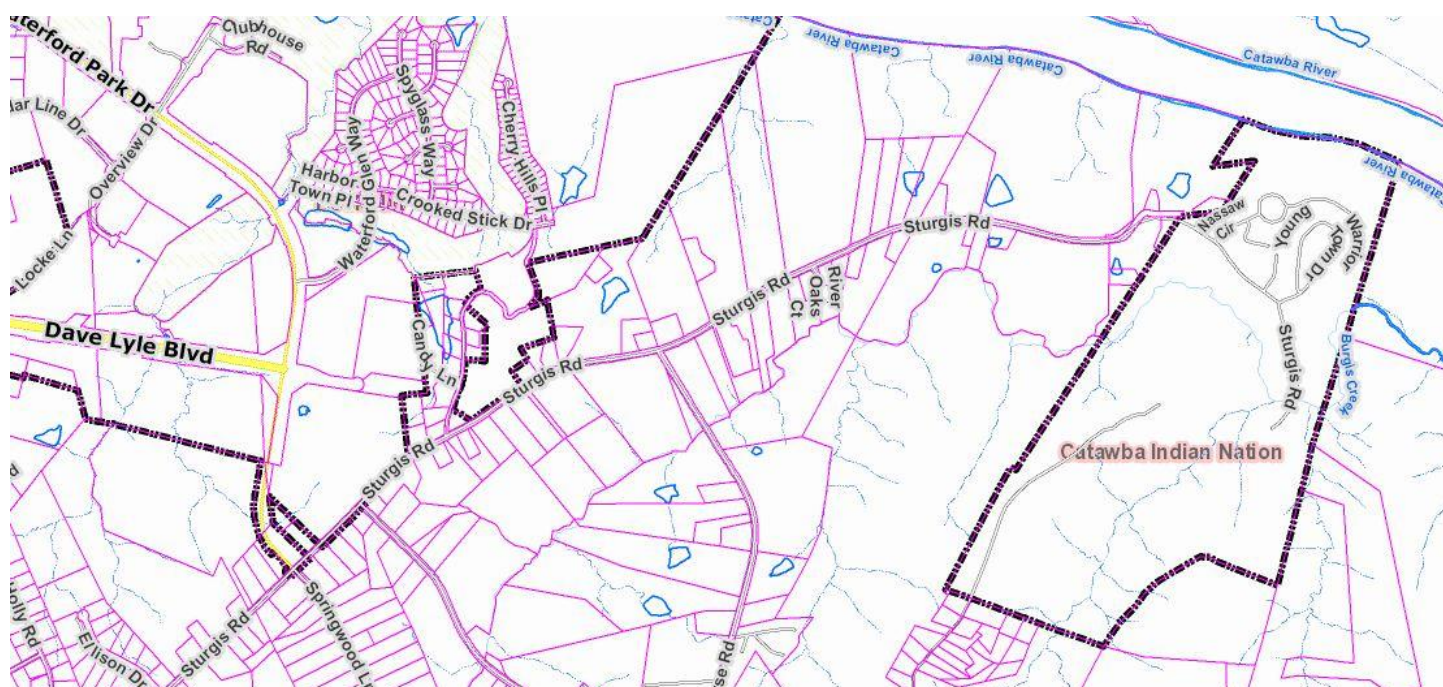






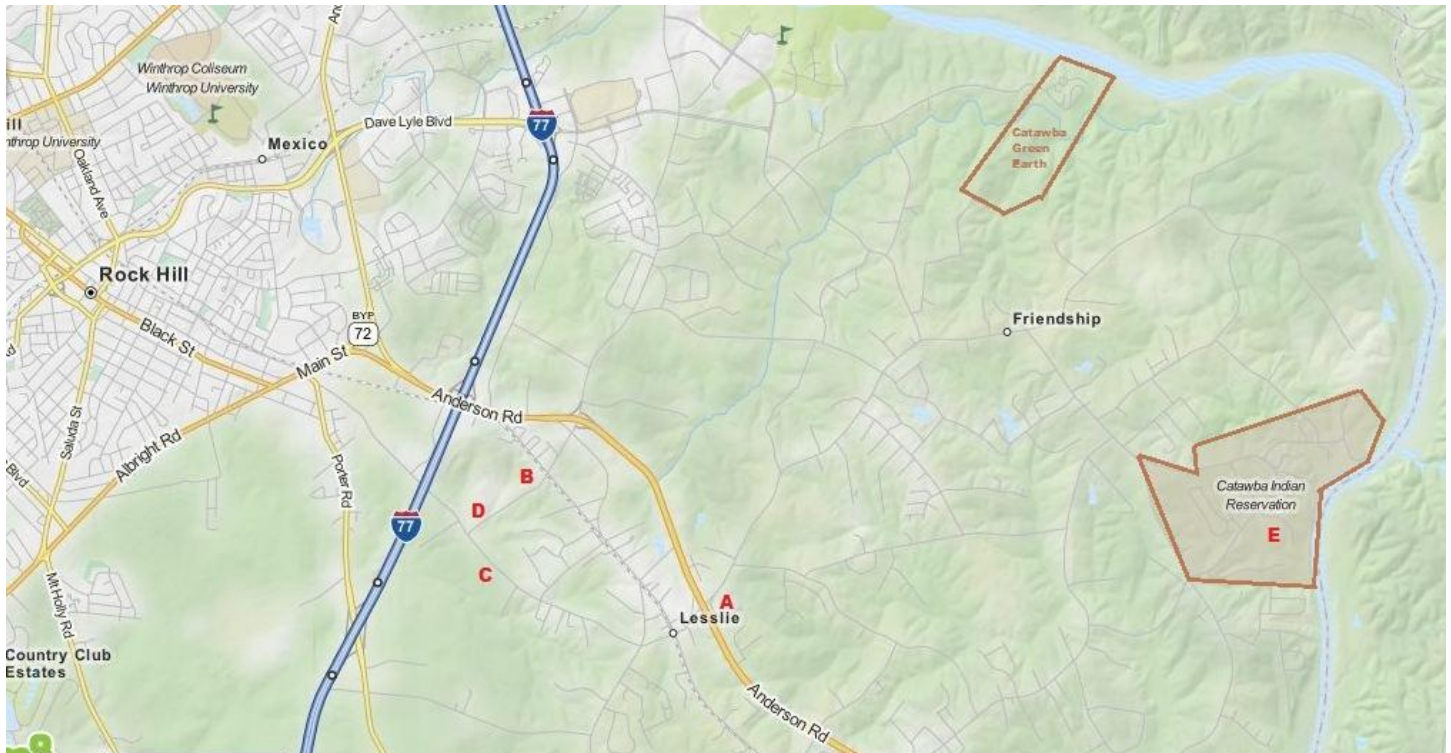
**Catawba Indian Nation  
"Green Earth" ~300 acres  
2 miles east of Rock Hill**

**90 Single Family Homes  
6 Multi-Family Buildings  
(w/32 apartments total)  
3 Public/Office Buildings**





## (10) Map of Rock Hill Area Schools Attended by Catawba Indian Nation Children



- A. Lesslie Elementary School, 250 Neely Store Road, Rock Hill, SC
- B. Independence Elementary School, 132 W. Springdale Road, Rock Hill, SC
- C. Castle Heights Middle School, 2382 Fire Tower Road, Rock Hill, SC
- D. Rock Hill High School, 320 W. Springdale Road, Rock Hill, SC
- E. ISWA Headstart, 1540 Tom Stevens Road, Rock Hill, SC

Total estimated # of Catawba Indian Nation children attending Rock Hill Area Schools = 179

# of Pre-School/Headstart aged children (3-5 years old) at Catawba Nation = 35

# of Elementary School aged children (6-12 years old) at Catawba Nation = 64

# of Middle School aged children (13-15 years old) at Catawba Nation = 33

# of High School aged children (16-18 years old) at Catawba Nation = 47

All schools attended by Catawba Indian Nation children (except ISWA Headstart) are located approximately 6 miles from both the Old Reservation and Green Earth on the east side of I-77.

Based on best available information from knowledgeable persons on the Catawba Indian Nation, it is estimated that 90% of tribal children travel to school by bus and 10% by car.



## (12) Catawba Indian Nation – Public Transit Program



The Catawba Transit Program has served a total of 131 individual tribal members since June 2011. The amount of use varies, but 131 is the total number of people that we have provided assistance which means that they have either NO transportation or limited transportation. The following is a break-down of monthly transit services provided:

June 2011 86 rides, 10 working days, avg 8.6 rides/day, 100 % from reservation properties

July 2011 182 rides, 21 working days, avg 8.6 rides/day, 93.4 % from reservation properties

Aug 2011 312 rides, 23 working days, avg 13.6 rides/day, 89.7 % from reservation properties

Sept 2011 213 rides, 22 working days, avg 9.7 rides/day, 96.2 % from reservation properties

Oct 2011 253 rides, 21 working days, avg 12 rides/day, 95.3 % from reservation properties

Nov 2011 318 rides, 19 working days, avg 16.7 rides/day, 95.6 % from reservation properties

Dec 2011 298 rides, 21 working days, avg 14.2 rides/day, 95.3 % from reservation properties

Jan 2012 375 rides, 20 working days, avg 18.75 rides/day, 97.9 % from reservation properties

(Source: Catawba Nation Community Planner/Transit Coordinator – February 2012)

(13) Bureau of Indian Affairs 2007 Average Daily Traffic count data for Catawba Indian Reservation Roads documenting existing ADTs in the 300-600 vehicles/day range and 20-year projections of 500-900 vehicles/day.

8/11/2009  
08:31 AM

U.S. DEPARTMENT OF THE INTERIOR BIA-DOT INDIAN ROADS NEED DATA  
Eastern Regional Office

BIA-5704  
RIFDS

| FIELD | FIELD DESCRIPTION             | CODE | DESCRIPTION           | FIELD | FIELD DESCRIPTION              | CODE | DESCRIPTION |
|-------|-------------------------------|------|-----------------------|-------|--------------------------------|------|-------------|
| 1-2   | Area / Agency                 | S50  | Eastern Region        | 47    | LevelofMaintenance             | 4    | Optimum     |
| 3     | Reservation                   | 032  | Catawba Nation        | 48    | SnowIceControl                 |      |             |
| 4-5   | Route/Section Number          | 1200 | 010                   | 49    | Beg-End Lat Long               |      |             |
| 6     | Class                         | 5    | Rural Local/Stub      | 50    | AtlasMapNumber                 | 01   |             |
| 7     | Length of Section (Miles)     | 0.6  |                       | 51    | MaximumGrade                   |      |             |
| 8     | Bridge Number                 |      |                       | 52    | PSDAallowable                  |      |             |
| 9     | BridgeCondition               |      |                       | 53    | No Curves >Max Allowance       |      |             |
| 10    | Length of Bridge (LF)         |      |                       | 54    | NoofStoppingRestrictions       |      |             |
| 11    | County                        | 091  | York                  | 55    | SafetyStudy                    |      |             |
| 12    | CongressionalDistrict         | 05   |                       | 56    | RoadPurpose                    | A    | General     |
| 13    | State                         | 45   | South Carolina        | 57    | DateofConstrChange             | 1959 |             |
| 14    | Ownership                     | 1    | BIA                   | 58    | DateofUpdate                   | 2007 |             |
| 15    | ConstructionNeed              | 1    | BIA Construction Need | 59    | FieldRemarks                   |      |             |
| 16    | Terrain                       | 2    | Rolling               |       |                                |      |             |
| 17    | Foundation/Roadbed Cond       | 5    | Constructed-Adequate  |       |                                |      |             |
| 18    | WearingSurface                | 60   | Good                  | 60    | BIADOT Remarks BIADOT USE ONLY |      |             |
| 19    | Surface Width (Feet)          | 20   |                       |       |                                |      |             |
| 20    | SurfaceType                   | 4    | Bituminous<2"         |       |                                |      |             |
| 21    | FederalAidFunding             | 1    | Local Roads           |       |                                |      |             |
| 22    | ROW Status                    | 03   | Recorded ROW          |       |                                |      |             |
| 23    | ROW Width (Feet)              | 040  |                       |       |                                |      |             |
| 24    | CTCEligible                   |      |                       |       |                                |      |             |
| 25    | Percent Add'l Incidental Cost |      |                       |       |                                |      |             |
| 26    | Shoulder Width (Feet)         | 1    | (Average Width)       |       |                                |      |             |
| 27    | ShoulderType                  | 3    | Paved                 |       |                                |      |             |
| 28    | ADTExisting                   | 325  |                       |       |                                |      |             |
| 29    | ADTYear                       | 2007 |                       |       |                                |      |             |
| 30    | PercentTruc                   | 07   |                       |       |                                |      |             |
| 31    | OwnerNumber                   |      |                       |       |                                |      |             |
| 32    | Roadway Width (Feet)          | 22   |                       |       |                                |      |             |
| 33    | ADT Estimate AADT YR+20       | 483  |                       |       |                                |      |             |
| 34    | AdequacyDesignStandard        |      |                       |       |                                |      |             |
| 35    | FutureSurfaceType             |      |                       |       |                                |      |             |
| 36    | IncidentalConstM              |      |                       |       |                                |      |             |
| 37    | GradeDrainM                   |      |                       |       |                                |      |             |
| 38    | GravelSurfacingM              |      |                       |       |                                |      |             |
| 39    | BituminousSurfacingM          |      |                       |       |                                |      |             |
| 40    | BridgesM                      |      |                       |       |                                |      |             |
| 41    | Drainage                      | 2    | Normal Problems       |       |                                |      |             |
| 42    | Shoulder                      | 2    | Tolerable             |       |                                |      |             |
| 43    | NoofRRCrossings               | 0    |                       |       |                                |      |             |
| 44    | TypeRRCrossings               |      |                       |       |                                |      |             |
| 45    | ROWUtility                    | 1    | Underground           |       |                                |      |             |
| 46    | RightofWayM                   |      |                       |       |                                |      |             |



Route Section Catawba Nation Route Name  
1200 010 Avenue of the Nations  
Looking Northeast 02/06/07

BegLatLong 34.9078N/80.8856W  
EndLatLong 34.9094N/80.8771W

AREA COORDINATOR:

INVENTORIED BY: ASCG, Inc.



8/11/2009  
08:30 AM

U.S. DEPARTMENT OF THE INTERIOR BIA-DOT INDIAN ROADS NEED DATA  
Eastern Regional Office

BIA-5704  
RIFDS

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| 4-5   | Route/Section Number          | 0100 | 010                   | 49    | Beg-End Lat Long               |      |             |
| 6     | Class                         | 4    | Major Collector       | 50    | AtlasMapNumber                 | 01   |             |
| 7     | Length of Section (Miles)     | 1.2  |                       | 51    | MaximumGrade                   |      |             |
| 8     | Bridge Number                 |      |                       | 52    | PSDAAllowable                  |      |             |
| 9     | BridgeCondition               |      |                       | 53    | No Curves >Max Allowance       |      |             |
| 10    | Length of Bridge (LF)         |      |                       | 54    | NoofStoppingRestrictions       |      |             |
| 11    | County                        | 091  | York                  | 55    | SafetyStudy                    |      |             |
| 12    | CongressionalDistrict         | 05   |                       | 56    | RoadPurpose                    | A    | General     |
| 13    | State                         | 45   | South Carolina        | 57    | DateofConstrChange             | 1959 |             |
| 14    | Ownership                     | 1    | BIA                   | 58    | DateofUpdate                   | 2007 |             |
| 15    | ConstructionNeed              | 1    | BIA Construction Need | 59    | FieldRemarks                   |      |             |
| 16    | Terrain                       | 2    | Rolling               |       |                                |      |             |
| 17    | Foundation/Roadbed Cond       | 5    | Constructed-Adequate  | 60    | BIADOT Remarks BIADOT USE ONLY |      |             |
| 18    | WearingSurface                | 50   | Fair                  |       |                                |      |             |
| 19    | Surface Width (Feet)          | 20   |                       |       |                                |      |             |
| 20    | SurfaceType                   | 5    | Bituminous>2"         |       |                                |      |             |
| 21    | FederalAidFunding             | 1    | Local Roads           |       |                                |      |             |
| 22    | ROW Status                    | 03   | Recorded ROW          |       |                                |      |             |
| 23    | ROW Width (Feet)              | 060  |                       |       |                                |      |             |
| 24    | CTCEligible                   |      |                       |       |                                |      |             |
| 25    | Percent Add'l Incidental Cost |      |                       |       |                                |      |             |
| 26    | Shoulder Width (Feet)         | 1    | (Average Width)       |       |                                |      |             |
| 27    | ShoulderType                  | 3    | Paved                 |       |                                |      |             |
| 28    | ADTExisting                   | 600  |                       |       |                                |      |             |
| 29    | ADTYear                       | 2007 |                       |       |                                |      |             |
| 30    | PercentTruc                   | 09   |                       |       |                                |      |             |
| 31    | OwnerNumber                   |      |                       |       |                                |      |             |
| 32    | Roadway Width (Feet)          | 22   |                       |       |                                |      |             |
| 33    | ADT Estimate AADT YR+20       | 891  |                       |       |                                |      |             |
| 34    | AdequacyDesignStandard        |      |                       |       |                                |      |             |
| 35    | FutureSurfaceType             |      |                       |       |                                |      |             |
| 36    | IncidentalConstM              |      |                       |       |                                |      |             |
| 37    | GradeDrainM                   |      |                       |       |                                |      |             |
| 38    | GravelSurfacingM              |      |                       |       |                                |      |             |
| 39    | BituminousSurfacingM          |      |                       |       |                                |      |             |
| 40    | BridgesM                      |      |                       |       |                                |      |             |
| 41    | Drainage                      | 2    | Normal Problems       |       |                                |      |             |
| 42    | Shoulder                      | 2    | Tolerable             |       |                                |      |             |
| 43    | NoofRRCrossings               | 0    |                       |       |                                |      |             |
| 44    | TypeRRCrossings               |      |                       |       |                                |      |             |
| 45    | ROWUtility                    | 3    | Both                  |       |                                |      |             |
| 46    | RightofWayM                   |      |                       |       |                                |      |             |

Route

Section

Catawba Nation

Route Name

0100 010

Indian Trail

Looking Northeast

02/07/07

BegLatLong

34.9080N/80.8880W

EndLatLong

34.8962N/80.8950W



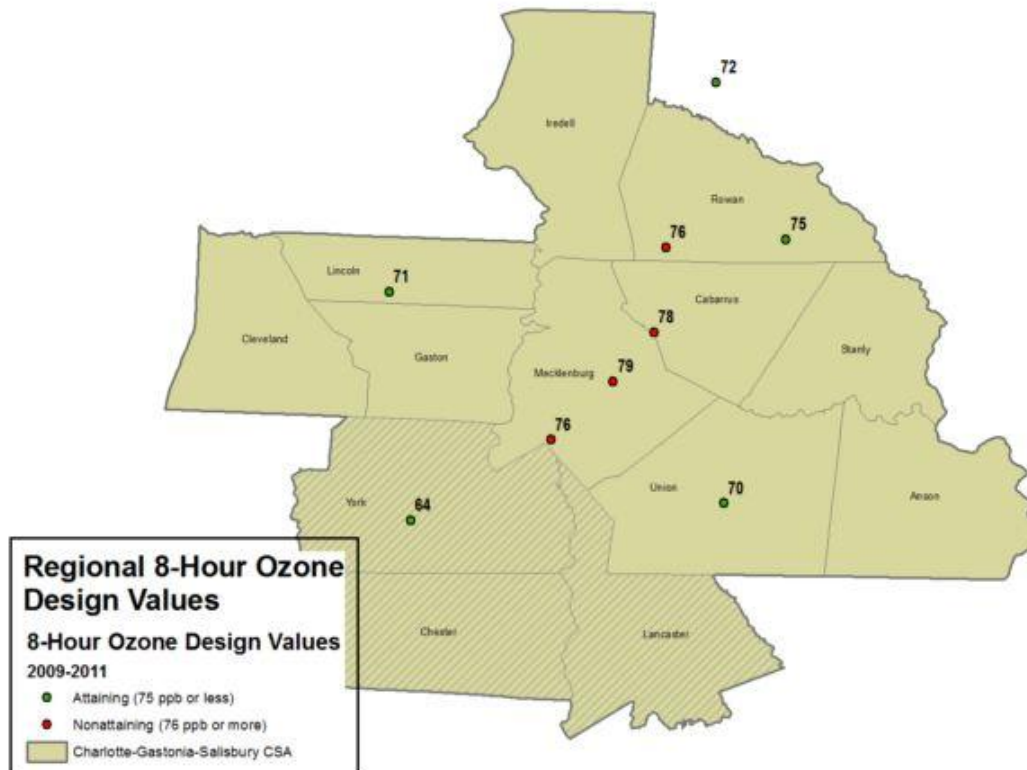
AREA COORDINATOR:

INVENTORIED BY: ASCG, Inc.

## (14) Ozone Design Values for the Metrolina region and Wind Rose data illustrating prevailing southwest winds for the Arrowood ozone monitor site.

(Source: NC Dept of Environment and Natural Resources, Division of Air Quality–Proposed Ozone Nonattainment Boundary Designation Presentation pages 19, 35.  
[http://daq.state.nc.us/planning/ozone/Boundary\\_Recommendation\\_Metrolina.pdf](http://daq.state.nc.us/planning/ozone/Boundary_Recommendation_Metrolina.pdf)  
[http://daq.state.nc.us/planning/ozone/Boundary\\_Recommendation\\_Metrolina.pdf](http://daq.state.nc.us/planning/ozone/Boundary_Recommendation_Metrolina.pdf))

# Metrolina Design Values



# Wind Roses

- Include wind direction for days with high ozone ( $\geq 70$  ppb)
- Shows where the wind was coming from

